## NEED BETTER METHODS

How to Conserve Grain Products by Substituting More Green Foods in Diet.

THINK UNWISE TO FORCE MOLT

Equip Fowls to Secure Maximun Results With the Least Wastage Before Frost Sets In, Winter Supply Should Be Stored.

BY H. ARMSTRONG ROBERTS. No experienced poultryman tries to keep fowls without some form of green food. Fresh, tender greens, or their equivalent, such as roots, cut clover hay and shredded alfalfa, stami for stamina. Green food, means health and vitality. It guarantees fertility in the breeding season. It means strong eggs and plenty of them. It insures eggs that will hatch well and produce strong, thrifty chicks. Laying hens cannot be induced to lay consistently without this kind of food. Pullets cannot be relied upon to start laying in the fall without green food. Of all the elements entering into poultry culture, greens, exercise and fresh air, which means sunshine, too, form a triumvirate of the first consideration. Given these things in abundance there is little need for the medicine bottle.

Green food is more vital to success this year than ever before because of the small cost at which it is available. We owe it to our pocketbooks and to a patriotic impulse to conserve as much grain as possible. We cannot raiso stock wholly without grain, of course, but we can reduce the amount of grain substantially, if we substitute more green foods. European poultry raisers have been obliged to depend upon green food for the bulk of their rations, and they have succeeded remarkably well.

Before frost sets in the winter's supply should be stored away. Lawn clippings and grasses can be cured the same as hay. Turnips and cabbases, can be stored in cellars or buried in pits.

Dried, cracked peas; beet putp, which is the residue from the manufacture of beet sugar; finely cut clover or mealed alfalfa are valuable substitutes for fresh greens, and all are much cheaper than the grain products. These dried greens should be scaled to freshen them, or streamed over night. Feed them separately or mixed with a little dry mash. Sliage is being fed to chickens, too, and this is an economical feed. And do not overlook the vegetable parings from the kitchen. Table scraps will go a long way toward keeping a small flock of hens.

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way toward keeping a small flock of hens.

Sprouted oats is an excellent form of suculence. It is not cheap, however, as some claim. Oats are oats, whether you feed them dry as whose grain, or in the form of sprouts. In the form of sprouts the bulk has been increased by the addition of water. This bulk is desirable.

Heat and moisture are the requisites for sprouting oats. Use natural oats, not clipped oats, and be sure the oats are not bleached. Bleached oats are virtually impossible to sprout. If you are troubled with mold, which is likely, wash the sprouting trays and other paraphernalia with a solution of formalin.

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TO PROCURE PROPER RESULT.

Don't assume that because fowls are given freedom to roam about a field or yard that they will pick up sufficient grit of the right sort. The pebbles found on the average farm or backyard are of little value as grinding material for the glzzard. They are not sharp enough. A smooth round pebble in a fowl's gizzard is of no more use than an ax handle would be for splitting wood. To be effective, grit must have sharp, angular corners. Like grindstones, they must have biting edges.

Poultry grit is a commercial article. It comes in three sizes, coarse, medium and fine, and of various substances. Use the coarse or medium grades for adult fowls: the fine 'grade is for young chicks. It sells for about 75 cents a hundred-pound sack—a good investment, too.

Oyster shells should be fed in addition to grit for the lime and other mineral substances which they contain. It is astonishing how much of these shells is consumed by a flock of hens during the heavy laying season, and how little during the unproductive season, which is the strongest kind of testimony as to their usefulness. Without oyster shells, the hens are likely to lay soft-shelled eggs, due to deficiency of lime.

Shells are specially prepared for poultry. They are sold by supply houses and feed dealers, and come in three grades similar to grit. The prices are slightly higher than the cost of grit.

Another important adjunct to the grain diet is charcoal. It sweetens the crop, aids digestion and acts as an absorbent. It has no food value in itself, regulates the digestive tract so that its value is nevertheless real. The organs obtain the maximum good from the grain diet. Some poultry keepers prefer to mix charcoal in the dry mash, which is a good idea. Or it can be given in a hopper by itself. Shells and grit should always be fed separately. Place them in nonwasteful hoppers and keep them before the flock

MOLT BY CUTTING FOOD.

Some breeders endeavor to hasten the molt by reducing the, rations to a point where the flock is only half fed for several weeks; their aim being to throw the fowls into poor condition, which is thought to dry up the oil in the feathers and cause them to fall out prematurely. As soon as this molting is well under way the flock is then restored to a full ration, and in some instances to an extra ration. In theory this sounds well; in practice it has too many disadvantages and risks. The chief disadvantage is that the egg yield is completely stopped, and at a time when eggs are bringing higher prices. Some hens lay quite a few eggs when they first enter the molt and up to the time when they commence to grow the bulk of their new feathers. True, they may take longer to finish the molt because of these eggs since their energy is divided between eggs and plumage; but then—the eggs count for something.

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The risk is that some of the birds may be so weakened by the starvation process that they lose too much flesh and vitality, and are too long in being returned to a normal condition. Then, too, in a weakened condition, they are more susceptible to sickness.

Forced molting is in the class with forced feeding. As a general practice it is too artificial, too intensive. Better let the hens molt naturally. The molting period is a resting period. The hen requires this rest, especially if you intend breeding from her next spring.

A leading State experiment station conducted a test with the view to finding out if the molt could be hastened successfully. A pen of birds was sheared like sheep; another pen was plucked like geese; a third pen was left to molt naturally; a fourth pen was given the regular ration received by all, with the addition of a tonic consisting of the following ingredients. A tablespoonful of the mixture was given once a day to ten fowls:

Magnesium sulphate . . . 10 ounces Magnesium oxide.

fowls;
Magnesium sulphate 10 ounces
Magnesium exide 1 ounces
Ground ginger 2 ounces
Ground ginger 3 ounces

DEFINITER METHODS

or poultry management

matter. In this case the feathers have a genuine value, much the same as the wool from sheep. Goose feathers, especially white ones, have a ready sale. They bring from 50 cents to \$1 a pound. The down may be removed separately; it is worth more. When one considers that a large goose will yield about a pound of feathers a year, this by-product is quite a source of revenue.

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Mature geese should be plucked but once a year, and not several times; as is the practice in some sections. The best time is during the warm weather following the breeding season, when geese have the least use for their neavy coats, and when there is no blood in the ends of the quills. At this time the feathers are said to be "ripe." They are just about ready to fail anyhow, consequently they are sasy to remove, and occasion no bleeding or discomfort to the birds.

The soft feathers on the breast, back and abdomen are the main portions of the plumage removed. Enough feathers should be left on both sides of the body to support the wings. If the skin is broken in picking, which is not likely to occur unless too many feathers are plucked at once, apply a little pine tar. In plucking a goose, draw a stocking over its head, to Ivoid being struck or bitten, because these birds can strike viclous bows.

HERDING THE TURKEY FLOCK

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HAS PROVED PROFITABLE.

Where turkeys are raised in large numbers it has been found profitable to herd them much as sheep of geess are herded. The flocks are driven be herded. The flocks are driven be reamed to her them much as sheep of geess are herded. The flocks are driven brough stubble fields where considerable stray grain can be gleaned, into pastures and meadows where grassioppers and other insects abound, and through woodland where the birds find many tid-bits to which they are accustomed naturally. A herder is needed, of course; a position for which children are qualified; and if two or more accompany, the flock the task will not be such a dull om.

A peculiar thing about this method is that once the day's route is established the flock can be made to follow practically the same tourse involved the flock can be made to follow practically the same tourse involved to much green grain is likely to cause indigestion.

In localities where turkey, flocks are allowed to intermingle for weeks at a time, it is advisable to mark the birds in some way for future identification. This will prevent loss, perhaps, or unpleasant disputes as to rightful ownership.

Leg-banding the fowls or punching the webs between their toes will serve the purpose nicely. If need be a record of the markings can be left with some town official for verification.

This is the season to select breeders for next year's turkey flock. If they are not chosen now and set aside the chances are all the best specimens will be killed for the holiday market, teaving a bunch of undersized culls for reproduction. Make up your mind now how many birds you expect to carry over; whether the old hens are to be used another season; how many pullets are required to replace the hens; and what is to be done about gobbiers.

Avoid inbreeding as you would a hiague. It is better to send a thousand miles for the assurances of unclated stock, even though it costs you a fair sum, than to run the risk o HAS PROVED PROFITABLE.

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LEARNING THEIR CARS

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Not only is this situation the result

known automobile man.

Not only is this situation the result of the increased demands on motor trucks, but the inability of manufacturers to keep up with the demand. It has been said that for every motor truck that can be manufactured next year, it is very easy to find from three to five buyers. In many cases, the total production for months to come has been contracted for. This necessitates present owners taking the best care of their present equipment.

Owners, through experience have

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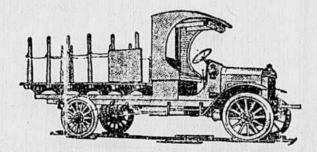
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